

19 November 1952

GENERAL CHARACTERISTICS
FOR
TIME SIGNAL RADIO

I. PURPOSE

This is to be a light, compact subminiature AM receiver designed to listen to Station WWV for the purpose of obtaining time signals. It shall have the general physical and performance characteristics outlined in the following paragraphs.

II. FREQUENCIES

A. Consideration should be given to receivers of the following frequencies:

- a. 5 megacycles
- b. 5,10,15, and 20 megacycles, each frequency
- c. 5,10, and 20 megacycles, each frequency

B. Stability - Maximum deviation from RF resonance shall not exceed $\pm 3\text{KC}$ ^{due to} ~~changes~~ ^{temperatures from 50 to 100°F, or as a result of hand} or body capacity.

III. PHYSICAL CHARACTERISTICS

The receiver, including battery shall not exceed the following maximum dimensions:

- a. Volume - 25.0 cu. in.
- b. Length - 7.0 in.
- c. Width - 3.5 in.
- d. Thickness - 1.0 in.
- e. Weight - 1.5 lbs.

DOCUMENT NO. _____
NO CHANGE IN CLASS. ☐
☒ DECLASSIFIED
CLASS. CHANGED TO: TS S **C** 2011
NEXT REVIEW DATE: _____
AUTH: HR 70-2
DATE: 7/10/94 REVIEWER: 037169

IV. PERFORMANCE CHARACTERISTICS (MINIMUM)

- a. Operating Life - 10 hours per set of batteries.
- b. Nominal Sensitivity - 1.0 microvolts input for a comfortable listening output to a pair of hearing aid type earphones.
- c. Selectivity - 20 db depression at 3KC either side of RF input signal resonance, or IF resonance if a superheterodyne receiver is recommended. 40 db down at \pm 10KC.
- d. Signal/Noise Ratio - Signal On/Signal Off - 40 db at nominal output.
- e. Audio Filters - Optimum use of audio filters to peak audio output at tick frequency (5 cycles of 1.0KC signal) and ICW frequencies (440 and 600 cycles)